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## **SUMMARY**

@Link welcomes the Commission's inquiry into the adequacy and appropriateness of the present local competition and collocation rules, particularly with respect to "the deployment of new network architectures, including the installation of fiber deeper into the neighborhood." The Commission's inquiry into whether this transformation in network architectures "necessitates any modification to, or clarification of the Commission's local competition rules, particularly . . . [those] pertaining to access to unbundled transport, loops and subloops" is vital to the future of competitive telecommunications.

To preserve competitive access to the last mile connections to consumers, the Commission should ensure meaningful competitive access to end-users served by fiber-fed distribution systems, often called Digital Loop Carriers ("DLC"s). Many advanced services, including those using Digital Subscriber Line ("xDSL") technology, cannot be transported over fiber-fed loops without the unbundled availability of necessary functionalities that enable a CLEC to deploy advanced services over these loops. These elements include the availability of unbundled xDSL-capable line cards, optical wavelengths, and the use of optical concentration devices. These elements must be made available on an unbundled basis and as a bundled Broadband UNE, which would serve the role of UNE Platform service for fiber-fed loops.

The purpose of @Link's comments with respect to collocation is twofold: first, to establish a basis to restore and improve upon the Commission's rules with respect to the collocation of multifunction equipment, and cross-connections to other CLECs; and second, to establish new procompetitive national collocation intervals and a national space reservation policy that build upon the Commission's *Collocation Reconsideration Order*. The Commission should promote the pro-competitive goals of the Act through a regulatory framework of rules that will

assure that CLECs can collocate a full range of modern telecommunications equipment on ILEC premises, including equipment that serves functions in addition to simple interconnection and access to UNEs. The Commission should define “equipment necessary for interconnection or access to UNEs” as encompassing any equipment that provides interconnection or access to UNEs. The Commission must adopt an interpretation of “necessary” that is not static; technology has not and will not stand still. The Commission must ensure that whatever interpretation it adopts does not deny CLECs the right to make the best use of technology as it develops.

The rapid emergence of new technologies demands a more flexible and forward-looking methodology for determining whether equipment satisfies the standards for collocation under the Federal Act. Additional functionality in CLEC collocated equipment may be necessary for interconnection and access to the functionalities of those loops and associated UNEs. Specifically, the Commission should rule that the functions performed by equipment that interacts with packetized information, such as ATM “switches” and routers, are “necessary” for interconnection and access to UNEs and, therefore, are eligible for collocation. The functionalities of ATM switches and routers are increasingly necessary for interconnection and, therefore, must be able to be collocated at both ILEC central offices and remote terminals. Any ancillary functionalities performed by such equipment do not change the fact that such equipment *is* necessary for interconnection.

@Link proposes that the Commission establish a 45 day interval for cageless collocation and for collocation in which the collocator completes some of its own installation. In addition, a standard 30 day interval should be established for collocation augments. The Commission should also ensure that ILECs are not able to undermine the interval rules by undue delays in providing necessary information and access to activate the collocation arrangement. In particular, @Link

proposes a 7 day interval for the production of any security cards required for admission into a central office.

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matters of	)	
	)	
Deployment of Wireline Services Offering	)	CC Docket No. 98-147
Advanced Telecommunications Capability	)	
	)	
and	)	
	)	
Implementation of the Local Competition	)	CC Docket No. 96-98
Provisions of the Telecommunications Act	)	
of 1996	)	
	)	

**COMMENTS OF  
@LINK NETWORKS, INC.**

@Link Networks, Inc. (“@Link”) submits these comments in response to the Commission’s notices of proposed rulemaking<sup>1</sup> in the above-captioned proceedings concerning the issues raised on remand<sup>2</sup> of the Commission’s First Report and Order and Further Notice of Proposed Rulemaking in Deployment of Wireline Services Offering Advanced Telecommunications Capability<sup>3</sup> (hereinafter the “Collocation Order”)<sup>4</sup> and concerning the need

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<sup>1</sup> In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket Nos. 98-147, 96-98, Order on Reconsideration and Second Further Notice of Proposed Rulemaking in CC Docket No. 98-147, and Fifth Further Notice of Proposed Rulemaking in CC Docket 96-98, FCC 00-297 (August 10, 2000) (“Collocation Reconsideration Order and NPRM”).

<sup>2</sup> *GTE Service Corp. FCC*, 205 F.3d 416 (D.C. Cir. 2000)(“*GTE v. FCC*”).

<sup>3</sup> CC Docket No. 98-147, 14 FCC Rcd 4761 (1999), *aff’d in part and remanded in part sub. nom. GTE v. FCC*, note 2, *supra*.

<sup>4</sup> The *Collocation Order* is sometimes referred to as the “Advanced Services Order” or the “Advanced Services First Report and Order.”

for revision of the Commission's local competition rules in light of deployment of next generation network architecture by incumbent local exchange carriers ("ILECs").

The Telecommunications Act of 1996 was enacted in order to "provide for a pro-competitive, deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition."<sup>5</sup> In order to effectuate this overriding congressional mandate, the Commission must establish rules governing next generation network architectures that promote the pro-competitive goals of the Act. The Commission must also adopt collocation rules that do not hamstring competitors' ability to provide a full range of basic and advanced telecommunications services. Thus, the Commission must allow collocation of a full range of telecommunications equipment used for interconnection or access to UNEs at any of the incumbent's premises, and affirm competitors' right to connect to other competitors' equipment at the incumbent's premises, and adopt rules relating to collocation at the remote terminals.

## **I. NEW UNES AND RULES ARE REQUIRED TO AFFORD MEANINGFUL COMPETITIVE ACCESS TO CONSUMERS SERVED VIA NEXT GENERATION TECHNOLOGIES**

In the *Collocation Reconsideration Order and NPRM*, the Commission seeks comment on whether "the deployment of new network architectures, including the installation of fiber deeper into the neighborhood, necessitates any modification to or clarification of the Commission's local competition rules, particularly our rules pertaining to access to unbundled transport, loops, and

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<sup>5</sup> S. Conf. Rep. No. 104-230, at 1 (1996). See also *Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 791 (8<sup>th</sup> Cir. 1997) (stating that Congress passed the 1996 Act, in part, "to erode the monopolistic nature of the telephone industry by obligating [ILECs] to facilitate the entry of competing companies into local telephone service"), *aff'd in part and reversed in part*, *AT&T v. Iowa Utils. Bd.*, 119 S. Ct. 721 (1999).



subloops.” @Link welcomes the Commission’s inquiry into the ramification of these undertakings on the landscape for competition. Unless the Commission’s rules change with the changing times to reflect these developments, the ILECs will be able re-secure complete dominance of the access to the last mile connecting the network to consumers. If xDSL providers (or “DLECs”) cannot access customers served over next generation networks and simultaneously experience a dwindling access to legacy copper resources, the future of the competitive advanced services market for residential and small to medium-sized businesses would gravely threatened.

In the *UNE Remand Order*, the Commission recognized that competitive carriers should have meaningful access to end-users served via ILEC DLC architecture, and therefore required ILECs to provide collocation at remote terminal premises and to provide unbundled access to subloops. However, as became evident during the Commission’s review of SBC’s Project Pronto, these general guarantees must be supported by numerous specific offerings if they are to have any practical value and enable consumers served via ILEC DLCs to have the benefit of competitive choices for advanced services. Remote terminals present a very different challenge for DLECs than central offices, because in most cases there is insufficient space to collocate DSLAMs in remote terminals. Absent regulation, ILECs would be expected to narrowly tailor the availability of these new supporting elements in order to frustrate the ability of CLECs to offer a wide variety of innovative services to their customers.

It is imperative that the Commission recognize that CLECs are not merely trying to stand in the way of the ILECs’ modernization of their networks. @Link recognizes the value of DLC expansion to extending the reach of advanced services to consumers who today are too far from a central office to obtain “traditional” xDSL service. However, CLEC access to DLC-served

customers is crucial not only in promoting competition and consumer choice; at stake is realization of the full capability and functionality of 21<sup>st</sup> century advanced services. Incumbent carriers to date have generally opted to limit their xDSL advanced services offerings to basic, lower-capacity ADSL Internet access service. If the Commission guarantees the availability of the elements described below, consumers will be able to obtain cutting-edge features such as video, interactive applications, teleconferencing, and other exciting new services. Competition will fuel the development of new services and will promote price and service competition.

To ensure that the full benefits of this new architecture and technology extend to all providers of service and all Americans, the Commission should revisit its local competition rules to assure that advanced services electronics and capabilities are included in the definition of UNEs, establish new UNEs, and require complete disclosure of ILEC network capabilities as well as to establish a duty to preserve legacy copper loops where feasible, once such loops are overbuilt by next-generation ILEC fiber loops.

To provide most advanced services to an end-user served by DLCs, the following supporting elements must be available: (1) the ability to lease xDSL-capable ILEC line cards and collocate their own line cards in the remote terminal ("RT"); (2) Asynchronous Transmission Mode ("ATM") bitstream connecting the RT to the ILEC's ATM switch or Optical Concentration Device located in the central office or an "edge" location; and (3) transport from the ILEC ATM switch to the CLEC's collocation arrangement. All of these requirements, which are described in more detail below, should be classified as UNEs. Finally, the ILECs should be required to price combinations of these elements, combined with the necessary subloops and cross-connects, as a single Broadband UNE.

The Telecommunications Act defines a UNE as a “facility or equipment used in the provision of a telecommunication service” which includes the “features, functions, and capabilities that are provided by means of such facility.”<sup>6</sup> The loop was initially defined by the Commission as “a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the network interface device at the customer premises.”<sup>7</sup> In its *UNE Remand Order*, the Commission modified its definition of the loop network element to include “all features, functions and capabilities of the transmission facilities, including dark fiber and attached electronics (*except those used for the provision of advanced services, such as DSLAMs* [emphasis added]) owned by the incumbent LEC, between an incumbent LEC’s central office and the loop demarcation at the customer premises.”<sup>8</sup> Thus, the Commission sought to ensure that its definition of the loop would apply to “new as well as current technologies.”<sup>9</sup> The Commission should now make it clear that this definition includes, among other items, both line cards, optical wavelengths, and OCDs employed as part of ILEC DLC systems.

#### **A. Line Cards**

Line cards are used to terminate the copper subloop from a customer premises to connect to a channel bank in the ILEC’s DLC equipment located in the RT. Modern, or “next-generation,” DLC equipment (“NGDLC”), supports the use of xDSL-capable line cards, which have integrated voice, DSLAM and splitter functionality.<sup>10</sup> Line cards are essential to the

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<sup>6</sup> 47 U.S.C. § 153(29).

<sup>7</sup> *In the Matter of the Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, FCC 96-325, First Report and Order, 11 FCC Rcd. At 15499 at ¶ 380 (1996) (“*Local Competition Order*”).

<sup>8</sup> *UNE Remand Order* at ¶ 167.

<sup>9</sup> *Id.*

<sup>10</sup> See e.g., Letter from Paul K. Mancini, SBC Vice President and Assistant General Counsel to Lawrence Strickling, Common Carrier Bureau in CC Dkt. No. 98-141, at 4 (Feb. 15, 2000) (“*SBC Letter*”).

functionality of a fiber-fed xDSL loop. The Commission has already effectively determined that these cards are a part of the UNE loop when in noted in the *UNE Remand Order* that, “[s]ome loops, such as integrated digital loop carrier (IDLC), are equipped with multiplexing devices, without which they cannot be used to provide service to end users. Because excluding such equipment from the definition of the loop would limit the functionality of the loop, we include the attached electronics . . . within the loop definition.”<sup>11</sup>

The most efficient means of installing line cards in many cases would be for the ILEC to lease a variety of line card options to the CLECs on a line-at-a-time and shelf-at-a-time basis. However, CLECs should be permitted to collocate their own line cards in remote terminals as well. A CLEC-owned line card option will ensure the availability of a full range of line card options, and will serve as a check against unreasonable prices or limitations with respect to the ILEC line card offering. In addition, a CLEC market for line cards would stimulate vendor development of new and innovative line card technologies.

As the Commission is aware, the particular line cards utilized by SBC in “Project Pronto” limit the type of xDSL a carrier may provide. For instance, the current “Project Pronto” line cards would not support SDSL service.<sup>12</sup> CLECs could overcome this limitation if they are permitted to collocate their own DSLAMs or line cards at each remote terminal. Collocation of DSLAMs at remote terminals is in most cases impractical or even impossible due to space limitations, but collocation of line cards offers a viable solution. A clear ruling from the FCC is needed on this point to ensure that ILECs cannot unduly prevent line card collocation under the pretext of technological compatibility standards allegedly necessary to safeguard the network.

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<sup>11</sup> *UNE Remand Order* at ¶ 175.

<sup>12</sup> CC Docket 98-141, Reply Comments of Alcatel USA at p. 2 (March 10, 2000).

SBC has already argued that it is under no legal obligation to allow CLECs to reconfigure SBC's equipment, and that the option to have CLECs select line cards of their choosing for installation in its remote terminals is technically infeasible.<sup>13</sup>

In order to address these issues, CLECs must be permitted to provision line cards, both at remote terminals and in the central office that would support the types of services they wish to offer. This solution has already been adopted by some state utility regulatory commissions. For example, the Illinois Commerce Commission recently required Ameritech:

. . . to install plug-in cards which support all DSL-based services requested by the CLECs. If Covad's or Rhythms' business plan calls for a particular DSL service that requires a plug-in card that Ameritech does not provide itself, the burden of proof will lie with Ameritech to prove that the plug-in card is incompatible with Project Pronto technology.<sup>14</sup>

This Commission should go a step further than this initial step taken by the Illinois Commission and permit CLECs to provision their own line cards in order to permit CLECs to access the full functionality and capability of the loops they purchase.

## **B. Optical Wavelengths**

Optical wavelengths are used to transport data between the remote terminal and the ILEC ATM switch. The availability of sufficient optical wavelength options is essential for the provision of a wide variety of services provided at a reliable quality of service. Dense wave division multiplexing ("DWDM") technology multiplies the capacity of an optical fiber by simultaneously operating at more than one wavelength, thereby allowing multiple information

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<sup>13</sup> CC Docket 98-141, Reply Comments of SBC Communications, Inc. In Support of a Determination that SBC Incumbent LECs May Own Combination Plug/Cards and Optical Concentration Devices at 15 (March 10, 2000). Ironically, one of the initial proposals SBC considered making to the Commission was to allow CLECs to own their cards and SBC would install the cards. *SBC Letter* at 3.

<sup>14</sup> Illinois Commerce Commission Dkt. Nos. 00-0312 and 00-0313, Arbitration Decision at 29 (Aug. 17, 2000).

streams to be transmitted simultaneously over the fiber.<sup>15</sup> This technology will allow carriers to sell or lease the individual streams of light in fiber-optic networks, which, in turn, would allow carriers and end users to purchase only the network bandwidth they want, when they want it. This gives a carrier growing capacity and intelligent provisioning of bandwidth, and may be one of the best long-term strategies for promoting sufficient capacity in a network.

The Commission asks whether these optical wavelengths are themselves loops or if they are a feature, function or capability of the loops. @Link submits that these wavelengths are frequency portions of a subloop, and can be analogized to line sharing of the electrical high frequency portion of copper loops. Just as the frequency of a copper loop is part of its capability, so too is the wavelength of a fiber loop or subloop. As with copper loops, competitive carriers should be allowed either to access unbundled loop functionalities such as “slices” of wavelength separate from other loop functions, or to access, at their option, the entire unbundled loop facility. This would lead to the most efficient use of available optical fibers. If a carrier wanted to access all wavelengths of the loop, it could purchase the entire loop and have exclusive use of the facility. However, in view of the high bandwidth of optical fiber, it is more realistic and efficient to envision the rational shared utilization of such fiber among carriers as their customer demand may warrant.

The Commission has sought comment on whether “accessing the features, functions, and capabilities of subloops consisting of fiber facilities includes access to *all* technically feasible transmission speeds and quality of service. . . classes such as Constant Bit Rate (CBR) and real

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<sup>15</sup> *Collocation Reconsideration Order and NPRM*, at ¶ 120, n. 253.

time and non real-time Variable Bit Rate (VBR) that exist in the attached electronics.” (emphasis added).<sup>16</sup> @Link submits that the answer to this question is an unequivocal yes.

In order to support a full range of advanced services, the CLEC must have access to permanent virtual circuits (“PVCs”) and permanent virtual paths (“PVPs”), available in any of the possible formats, including ITU-T Quality of Service Classes A, B, C, and D; ATM Forum Quality of Service Classes 1, 2, 3, and 4; and Service Class Categories Available Bit Rate, Constant Bit Rate, Variable Bit Rate – real time, Variable Bit Rate – not real time, and Unspecified Bit Rate. @Link has previously commented to the Commission on the essential nature of these Quality of Service classes (QoS) for the provision of a wide variety of services.<sup>17</sup>

CLECs need the ability to provide customized service to consumers when they request those services. The ATM qualities of service described above would enable such service. For example, with constant bit rate (“CBR”), bits are conveyed regularly in time and at a constant rate. This is especially important in regard to sending uncompressed voice and video traffic because these are sensitive to variable delay, thus, they have to be transported without any interruptions in the flow of data.<sup>18</sup> By contrast, in its initial Project Pronto offering, SBC proposed to offer only unspecified bit rate QoS. After numerous CLECs, including @Link, explained to the FCC that such limitation would exclude such advanced services, as well as future DSL services such as VDSL and G.shDSL, SBC agreed to provide CBR service.

The Commission should now designate all of the above-listed QoS ATM options to be made available on a UNE basis. No one has disputed that all of these wavelength options are

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<sup>16</sup> *Collocation Reconsideration Order and NPRM* at ¶ 125.

<sup>17</sup> See Letter from @Link Networks, Inc. to Carol E. Matthey, CC Dkt 98-141 (June 30, 2000).

<sup>18</sup> *Id.*

technically feasible, and ILECs will be able to recover their TELRIC costs for providing them. By avoiding the technical limitations imposed by an ILEC's choice of a particular technology, the various QoS technologies allow carriers to provide a full array of services over a fiber loop. Without the full range of options described above, CLECs would not be able to manage their traffic in a manner that met their various customer's service requirements, and therefore would not be able to utilize the full function and capability of its UNE loop.

### **C. Optical Concentration Device**

The ATM switch in typical NGDLC architecture is an Optical Concentration Devices ("OCD"). OCDs separate each carrier's ATM packetized bitstream from the common ATM packetized bitstream coming from the remote terminals, and hand off the appropriate packetized bitstream to each carrier. Under SBC's proposed network configuration in "Project Pronto," the OCDs are "the only means by which the ADSL-based traffic of multiple CLECs can be aggregated and disaggregated."<sup>19</sup> Thus, the OCD will be the only feasible point at which CLECs can get access to the ATM's bit streams coming from their customers via the remote terminal. Therefore, the Commission should define the fiber UNE loop as including OCDs where such devices are deployed. This will enable CLECs to access the OCD functionality as part of the loop UNE.

### **D. The Broadband Fiber Loop UNE**

A combination of subloops, ILEC line cards, optical wavelengths, access to an ATM switch and the transport, described in part above, should be made available as a bundled

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<sup>19</sup> CC Docket 98-141, *Ex Parte* Letter from DSL Access Telecommunications Alliance to Carol Matthey at 4 (April 11, 2000). The placement of the OCDs in the central office is an indication of SBC's failure to consider more economical alternatives, such as allowing CLECs to access the bitstream at the DLC, which would preclude



“Broadband fiber loop UNE” that would provide a CLEC with the use of an integrated loop facility. This proposed UNE could be viewed as the NGDLC equivalent of the UNE Platform; it together is a UNE because it consists of the fiber UNE loop and all of the features necessary to utilize the functionality of the loop. @Link proposes that this product offering be an extension of the latest iteration by SBC of its Broadband Service Offering.<sup>20</sup> In that offering, SBC offers access to:

a combined network arrangement consisting of: copper facilities from the NGDLC device deployed in remote terminal sites (includes CEVs, huts, and cabinets) to the end user location; a permanent virtual circuit that consists of ATM data transported over a common OC-3c fiber facility from the NGDLC in the remote terminal terminating on the central fiber distribution frame and delivered to a leased affiliated or unaffiliated telecommunications carrier port on the SBC/Ameritech incumbent LEC’s OCD in the serving wire center; and a port on the SBC incumbent LEC’s OCD with associated cross-connects to extend the port to a point of affiliated or unaffiliated telecommunication carrier virtual or physical collocation.<sup>21</sup>

The above-quoted SBC product offering should be allowed to evolve and adapt to reflect different NGDLC architectures and new product developments. A UNE corresponding to that SBC product offering should provide for deployment of equipment that gives a CLEC full access to the existing features and functionality of the facility. As with all UNEs, this offering should be updated and extended to a generically defined UNE capable of providing the full capabilities of such architectures and new technologies independently of ILEC-specific variations in software and hardware.

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the need for a central-office based ATM switch, including the need for a multiport DLC at the CO, and allow for the deployment of fewer ATM switches.

<sup>20</sup> CC Docket No. 98-141, Letter from Priscilla Hill-Ardoin, Senior Vice President SBC Telecommunications, Inc. to Magalie R. Salas, Secretary of the FCC, SBC Voluntary Commitments at Attachment page 1 (August 2, 2000)(“*SBC Commitments Letter*”).

<sup>21</sup> *Id.*

**E. Copper Loops Must Be Maintained Where Feasible**

The Commission seeks comment on the impact the deployment of the newer technologies will have on copper facilities and specifically whether incumbents should be required to leave existing copper facilities in place and available for use by other carriers where the ILEC may have superseded and no longer utilizes such facilities due to fiber-overbuild. Where the existing copper local loop is removed as part of an upgrade to next generation local network deployment by the incumbent, part of the promise of such overbuild from a competitive perspective is lost: instead of two loops into the home, such advances in technology would bring about nothing but a new competitive bottleneck in the form of Project Pronto-style architectures not fully accessible to competitors. Simultaneously, the option of competitors accessing the legacy copper loop as an alternative avenue to the customer would be literally rooted out. As recent developments illustrate, the systematic destruction of legacy copper loop infrastructure is not a hypothetical issue; the Commission needs to take this opportunity to affirmatively prevent further and larger-scale losses of copper local loop infrastructure where their removal is not driven by technical imperatives but rather the desire to seize control of the digital bottleneck into the home on the part of ILECs replacing their legacy networks.

The Commission needs to ensure that these copper facilities are maintained in such a manner that they provide a viable alternate source of CLEC access to customers. The importance of these facilities has been by no means lessened by the NGDLC architecture being deployed by the incumbents, and in some cases, their importance has been heightened, particularly to those CLECs whose business plans are focused on the use of copper facilities and who can only imperfectly transition their product offering to the ILEC's NGDLC architecture. The result of

any destruction of copper loops for some CLECs, and particularly data carriers like @Link, may be to reverse years of progress on the road to competition and forestall facilities-based competition.

One of the main reasons the *UNE Remand* proceeding identified the subloop as an unbundled element was to facilitate CLEC access to customers in an IDLC environment.<sup>22</sup> While technology has provided more ways for CLECs to access IDLC customers, incumbent deployment of the NGDLC architecture will result in some CLECs having difficulties accessing their customers.<sup>23</sup> In addition, some competitive carriers may not, for technical and economic reasons, want to use NGDLC loops. Maintaining existing copper facilities in the subloop will give CLECs more options in providing such access.

As the Commission well knows, in Richardson, Texas, when SBC deployed fiber-to-the-curb technology that effectively precluded CLEC provision of advanced telecommunication services, including xDSL services, SBC eliminated most of the copper infrastructure in that network segment.<sup>24</sup> CLECs collocated at the Richardson, Texas, central office were left with “little if any access to copper loop UNEs for the provision of xDSL service.”<sup>25</sup> This precipitous removal of copper facilities rendered the expensive collocation arrangements CLECs made in Richardson, Texas, virtually useless, and precluded their ability to provide advanced services.<sup>26</sup> In

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<sup>22</sup> *UNE Remand Order* at ¶ 217. At that time CLEC access to the IDLC loop at the central office was not technically feasible, so the CLEC needed to access the loop at the remote terminal.

<sup>23</sup> As discussed below, the lack of collocation space for CLEC DSLAMs in many NGDLC remote terminals coupled with interoperability issues with line cards could effectively preclude a CLEC’s ability to access its customers. The continued availability of copper facilities is a solution to these potential problems.

<sup>24</sup> Letter from Mpower Communications Corp. to Carol Matthey, CC Docket No. 98-141 at p. 2-4 (August 15, 2000).

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

light of SBC's actions in Richardson, incumbents should not be given unilateral, unfettered control over facility deployment and, specifically, the removal of copper loops.

As the Commission knows, after the Richardson incident, SBC stated that (1) it has no current plans, or plans under consideration to retire mainframe terminated copper facilities with NGDLC deployment; (2) it will follow its established copper retirement policy in a non-discriminatory manner; (3) if it does retire copper facilities pursuant to its NGDLC deployment, it will give six months' notice of such retirement via Internet posting and offer to sell such facilities to unaffiliated parties; and (4) the application of its copper retirement policy during the next three years will result in the retirement of no more than 5% of its total mainframe copper facilities in service as of September 1, 2000.<sup>27</sup> These commitments, and particularly the limited timeframe over which these policies will be followed, are inadequate, and the Commission should broaden them and apply them to all incumbents.

The Commission should make the requirement to maintain existing copper loops apply to all incumbents unless they can demonstrate to the relevant state commission technical reasons to eliminate the copper. This requirement should continue for at least ten years. CLECs need that time in order to adequately finance and implement new business plans. In this connection, traditional rate base rate-of-return analyses have generally assumed a useful life to 25-30 years for copper loops. Therefore, requiring ILECs to maintain copper loops for ten years is realistic and not unduly burdensome for the incumbents.

In addition to addressing the CLEC access issues, the continued use of copper facilities should be beneficial from a network perspective as well. Copper remains the most economical

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<sup>27</sup> *SBC Commitments Letter*, Voluntary Commitment No. 7.

medium for the distribution portion of the loop, particularly given the high cost of fiber-to-the-curb technology. In addition, many of the technological advances described in regard to fiber technology are occurring with copper as well, such as for line sharing for voice and data services. Finally, incumbents should be precluded from focusing its retirement efforts on particular central office(s), which could result in effectively retiring the copper loops in an entire area. Otherwise the ILEC could target its retirement plans to areas in which competition is thriving, thereby thwarting such competition, and promoting the interests of the respective ILEC's advanced services affiliate.

## **II. THE COMMISSION SHOULD ESTABLISH STRONG NONDISCRIMINATORY COLLOCATION RULES TO PROTECT AGAINST INCUMBENT INCENTIVES TO DENY FULL ACCESS TO AND USE OF THEIR PREMISES**

Section 251(c)(6) of the Act requires incumbent LECs to provide for "physical collocation of equipment necessary for interconnection or access to UNEs . . . on rates, terms, and conditions that are just, reasonable, and nondiscriminatory." Under this provision, the Commission has authority to adopt rules to ensure parity between ILECs and CLECs with respect to obtaining access to and use of ILEC central offices and other premises including remote terminals. The prohibition against discrimination that appears throughout Section 251 is unqualified and absolute. Section 251 does not qualify the term "nondiscriminatory" with the words "undue" or "unjust and unreasonable," as other sections of the Communications Act do and as some other regulatory statutes do. Not only is "parity" legally required by Section 251(c)(6) but, as a practical matter, it is required to obtain the pro-competitive goals of the Act. As four years of attempting to implement the Telecommunications Act have demonstrated, incumbents have a strong incentive to discriminate against new entrants by providing them with less favorable terms

and conditions of interconnection than it provides itself. That incentive mandates strong rules and strict enforcement of the prohibition against discrimination contained in the statutory language of Section 251.

In accordance with its comprehensive authority to assure reasonable and nondiscriminatory collocation on ILEC premises, the Commission should establish rules governing the terms and conditions for collocation that will achieve competitive parity between the incumbent LECs and their CLEC customers. The Commission should establish rules that provide CLECs with the same rights to collocate in ILEC central offices and remote terminals – in terms of access, price, and quantity and use of space – as those are enjoyed by incumbents. The statutory requirement that ILECs provide non-discriminatory physical collocation can mean no less. In subsequent sections of these comments, @Link suggests specific rule changes that will promote this overall statutory mandate.

**A. The Commission Must Include an Analysis of Whether Equipment Is “Necessary” for Effective Competition in Its Interpretation of Section 152(c)(6)**

In *GTE v. FCC*, the D.C. Circuit determined that the Commission’s interpretation of “necessary” under Section 251 (c)(6) seemed “overbroad.” Particularly in light of the Supreme Court’s recent discussion of the term “necessary” in *AT&T Corp. v. Iowa Utilities Board*, the Court found that the Commission’s rules that required collocation of any equipment “used or useful” for interconnection or access to UNEs must be reexamined. Thus, the Court vacated and remanded the order for the Commission to reconsider its rules relating to the equipment that a competitive carrier may place in collocation space.

At the same time, the Court specifically stated that it was not vacating the Collocation Order “to the extent that it . . . requires LECs to provide collocation of . . . equipment that is

directly related to and thus necessary, required, or indispensable to interconnection or access to UNEs.”<sup>28</sup> The Court did not require the Commission to change the basic premises of its rules, rather it required a better explanation and analysis of the rules in light of the statutory language and purpose of the Act. In addition, the Court did not state that multi-functional equipment could not be allowed or that the Commission could not consider efficiency for competitive providers in its interpretation. Nor did the Court indicate that the Commission should not take the intention of Congress, both in Section 251 and the entire Act, into consideration in reviewing its collocation rules. In fact, the Court clearly stated that the term “‘necessary’ must be construed in a fashion that is consistent with the ordinary and fair meaning of the word, *i.e.*, so as to limit ‘necessary’ to that which is required to achieve a desired goal.”<sup>29</sup>

The task before the Commission is not an easy one. But the Commission must keep in mind that any interpretation of the term “necessary” in this context has far-reaching implications for the industry as a whole, with an unduly narrow approach potentially jeopardizing vigorous competition now and in the future. As noted, the Telecommunications Act was enacted to “provide for a pro-competitive, deregulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition.”<sup>30</sup> In addition, collocation of competitors’ equipment at the incumbent’s premises was required to ensure that interconnection and access to UNEs is accomplished in a manner that will satisfy those goals, not in a manner that will delegate competitors to providing second class service. In

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<sup>28</sup> *GTE v. FCC*, 205 F.3d at 424.

<sup>29</sup> *Id.* at 423 (emphasis added). The Court recognized that the Commission might interpret “necessary” more broadly than it had.

<sup>30</sup> S. Conf. Rep. No. 104-230, *supra* note 5, at 1.

establishing new collocation rules in response to the D.C. Circuit's remand, the Commission must keep in mind these overarching pro-competitive goals of the 1996 Act.

**B. “Necessary” Standard Adopted in the UNE Remand Order Is Not Appropriate in the Context of Deciding What Equipment can be Placed in Collocation Space**

In the *Collocation Reconsideration Order and NPRM*, the Commission asked for comment on whether it should adopt the definition of “necessary” that it employed in the *UNE Remand Order* concerning access to proprietary network elements.<sup>31</sup> In the *UNE Remand Order*, the Commission defined an element as “necessary” “if, taking into consideration the availability of alternative elements outside the incumbent’s network . . . lack of access to that element would . . . preclude a requesting carrier from providing the services it seeks to offer.”<sup>32</sup> This definition makes no sense in the context of deciding whether certain equipment may be collocated in an incumbent’s premises. While the word “necessary” is obviously the same in both Section 251(d)(2)(a) and 251(c)(6), the Commission must consider the difference in the context of that word in the two sections and technical realities in interpreting that term. The “necessary” standard for access to proprietary UNEs was intended to afford some protection for proprietary information. As the Supreme Court pointed out, if the Congress had wanted to give blanket access to incumbents’ networks, it would not have included Section 251(d)(2) in the statute at all. Section 252(d)(2) is clearly meant to “limit” the effect of Section 251(c)(3).

Section 251(c)(6), however, is an enabling rather than a limiting section of the Act. In addition, there are different considerations with respect to collocation of equipment by CLECs on ILEC premises and, therefore, there is no need to assume that Congress intended the same

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<sup>31</sup> *Collocation Reconsideration and Order and NPRM* at para 75.

<sup>32</sup> *UNE Remand Order* at para 44.



analysis to apply. The only limiting factor with respect to collocation is that the equipment must be “necessary” for interconnection or access to unbundled elements.

In addition, with respect to equipment to be placed in a collocation space, the Commission must take into account the fact that, in response to evolving network architectures and consumer demand for new, advanced services, equipment has developed that is now “necessary” for interconnection or access to UNEs, but which also includes functions (or at least capabilities) that may not actually be part of interconnection or access to UNEs. This too is not a factor in the analysis of what UNEs are available under Section 251(d) and distinguishes the meaning to be ascribed to the term “necessary” in this context. The Commission must recognize that an inability to collocate any but the most bare-bones equipment would preclude CLECs from providing competitive and efficient services and, therefore would thwart the purpose of the Telecommunications Act.

Since multi-functional equipment is increasingly vital to competitive, and particularly DLEC service offerings, the economic barriers that would be erected by requiring CLECs to establish separate offices for this equipment, in addition to collocation space, would thwart achievement of the competitive goals of the Act. As the contemporary telecommunications market for both voice and data services becomes increasingly characterized by packetized data traffic, there is no longer a meaningful distinction between interconnection and switching functions, especially in equipment that is no more than data processing equipment that receives and processes data streams according to directions from software resident in the equipment. While circuit switching equipment establishes connections between circuits, and open and closed circuits, packet “switches” at most determine what routes data packets should take over circuits,

usually dedicated circuits. This function is integral to the exchange of packetized information in any contemporary telecommunications network.

Accordingly, enforcing an obsolete distinction of convergent functions serves no purpose and is anathema to the pro-innovative and competitive goals of the Act. Equipment such as ATM switches and routers are themselves absolutely necessary for interconnection under the statutory standard whether they are viewed as integrated with other, additional functional capabilities or not. It is worth noting that the increasing reliance on such multi-functional equipment is not confined to competitive carrier networks; rather, incumbent carriers are modernizing their networks to incorporate the same types of multi-functional equipment which they would like to see banished from collocation spaces: for example, the OCD device that SBC plans to employ in connection with its “Project Pronto” is essentially an ATM switch. It is absolutely necessary that CLECs use an ATM device in order to interconnect with these OCDs. It is therefore self-evident that CLECs must be permitted to collocate such devices.

The Commission should also define equipment “necessary” for access to UNEs as encompassing any equipment necessary to access the features, functions, and capabilities of UNEs. The Act defines network elements as including their “features, functions, and capabilities.”<sup>33</sup> In order to access those functionalities, CLECs must employ equipment that is capable of interacting with those features, functions, and capabilities. Therefore, any equipment meets the statutory necessary test if it enables CLECs to access those features, functions, and capabilities of the UNEs. As ILECs employ more advanced electronics in loops and central offices and their functional sophistication increases, the range of equipment that CLECs should be

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<sup>33</sup> 47 U.S.C. § 3(29).

allowed to collocate must change correspondingly. ILECs are increasingly deploying data equipment and optical systems as part of loops and other UNEs to such an extent that the Commission is being urged to designate a number of new UNEs which take into account these evolving “next generation” ILEC architectures. In recognition of the necessity of CLEC equipment to work with such ILEC equipment for the efficient delivery of telecommunications services, the Commission should determine that any equipment that interacts with any of the capabilities of these UNEs is by definition necessary for access to UNEs.

**C. Any Commercially Available Equipment that Provides Competitively Viable Interconnection or Access to UNEs Meets the “Necessary” Test**

In keeping with the deregulatory thrust of the Act, which is premised upon the market-driven development of competing products and services, the Commission should not allow itself to be drawn into the role of an equipment-standards institute. The Commission is not and should not be in the business of limiting, either specifically or by generally applicable rules, a carrier’s choice of what equipment should be collocated as long as the equipment actually performs the function of interconnection or access to UNEs. The Commission should reject the thrust of the ILEC arguments which would impose a narrow and innovation-hampering classification of the types of equipment that under a static, superseded conception of the network “enabled” interconnection and access to UNEs. Instead, the Commission should let the marketplace determine the equipment that most efficiently enables interconnection or access to UNEs in an open and encompassing definition capable of evolving with new services and the technologies used to deliver them to the consumer.

The Commission should find that any commercially available equipment that a CLEC seeks to place in collocation space that has the capabilities and functions that provide

interconnection or access to UNEs meets the “necessary” test. There are numerous products on the market that have such capabilities and that enable interconnection or access to UNEs. Absent reliance on the marketplace to define what equipment may be used for interconnection or access to the UNEs, the Commission is likely to become enmeshed in detailed examination and virtual design of telecommunications equipment and networks. Allowing the marketplace to define what equipment enables interconnection or access to UNEs will assure that incumbents are not able to use equipment classifications, evaluations and testing as yet another tool for delaying competition.<sup>34</sup>

**D. Multifunction Equipment Is Eligible for Central Office Collocation**

1. Allowing Multifunction Equipment Is Consistent with the Act

“Necessary” must be interpreted to mean that the incumbent must allow collocation of any equipment that contains the features and functionalities to enable efficient interconnection or access to UNEs, irrespective of additional telecommunications functionalities that this equipment may contain. Additional features and functionalities do not change the nature of the functionalities that are “necessary” for interconnection or access to UNEs. As long as equipment provides interconnection or access to UNEs it should be permitted to be collocated even if it also performs data routing and other functions, including switching. As noted above, the D.C. Circuit did not in any way limit the equipment that could be placed in collocation space to that equipment that performed only an interconnection or access to unbundled network element functionality.

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<sup>34</sup> ILECs are currently attempting to classify cutting-edge equipment used in data communications as switching equipment in an attempt to exclude it from eligibility for collocation and disadvantage competitors. An inability of CLECs to collocate the most advanced and efficient equipment, even as ILECs themselves deploy it, would cause serious competitive harm to CLECs. As explained, the functionality of this equipment is integral to interconnection and access to UNEs and, therefore, eligible for interconnection under the statute.

One of the principal purposes of the Telecommunications Act of 1996 was “to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans.”<sup>35</sup> In light of this purpose, there is no indication that Congress intended to freeze the implementation of “equipment necessary for interconnection” at the level of the technology available at that time, precluding collocation of subsequently-developed packet-switched network architectures and corresponding multi-functional technology. The Commission should certainly take no actions that would limit the equipment that could be placed in collocation space to older, less efficient, single function equipment. The equipment that is being designed and manufactured today is more open structured and allows for greater flexibility for both carriers and end users than the equipment of only a few years ago. The Commission should not turn its back on these developments that can only result in networks better tailored to each end user’s needs.

Equipment that provides interconnection or access to UNEs in addition to other functions is also “necessary” because CLECs would be unable to compete effectively if they could not collocate such equipment. If the CLEC were required to obtain inefficient single purpose equipment in the collocation space, the CLEC would have to run lines from the ILEC Central Office to its own switch site. Obviously, the additional costs that would be incurred by CLECs would be a substantial burden on competition.<sup>36</sup> Accordingly, the Commission should conclude that collocation of multifunction equipment is necessary because of the economic and practical barriers to competition that would be created by a mandatory location of such equipment at a separate location.

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<sup>35</sup> Sen. Rept. No. 104-230, 104<sup>th</sup> Cong., 1<sup>st</sup> Sess. (March 30, 1995) at 1-2.

<sup>36</sup> In rural areas the impact would tend to be even greater than in urban areas because the transport between offices would tend to be longer.

2. The Commission May Require ILECs to Permit Collocation of Multifunction Equipment as a Reasonable Condition of Collocation

Section 251(c)(6) requires ILECs to provide physical collocation of equipment necessary for interconnection and access to UNEs on rates, terms, and conditions that are reasonable and nondiscriminatory. Thus, the Commission may define the “reasonable conditions” pursuant to which ILECs must offer physical collocation.<sup>37</sup> Pursuant to that section, the Commission may, and should, require that ILECs permit collocation of multifunction equipment and some stand-alone equipment as a reasonable condition of providing collocation generally.

In carrying out its authority to establish terms and conditions for collocation, the Commission is not bound to adopt rules that require ILECs to provide only the minimum terms and conditions “necessary” to allow for interconnection. Once equipment is determined to be *necessary* for interconnection or access to UNEs – and thus eligible for collocation on incumbent premises – the Commission may adopt “reasonable” and “nondiscriminatory” conditions to that requirement. Indeed, once collocation is deemed necessary for interconnection and access to UNEs under Section 251(c)(6), the requirement that the incumbent offer collocation on “reasonable” and “nondiscriminatory” terms and conditions applies *a fortiori*.<sup>38</sup>

As explained, disallowing collocation of multifunction equipment could increase a CLEC’s cost of providing competitive services significantly, especially in smaller and rural markets, because of the need to obtain separate space and communications links to backhaul traffic from the ILEC central office. This would add additional potential points of delay in the CLEC

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<sup>37</sup> The court’s decision in *GTE v. FCC* is not to the contrary. The court did not rule out reasonable guidelines for the provisioning of collocation space to achieve the manifest statutory objectives of the Act. The court specifically stated that, on remand, “the FCC will have an opportunity to refine its regulatory requirements to tie the rules to the statutory standard . . . .” 205 F.3d at 426.

networks and would also substantially delay, and otherwise handicap CLEC entry into new markets.

A requirement in the Federal Act to permit collocation of CLEC Class 5 circuit switches would have created a tremendous additional burden on ILEC central offices. By contrast, the advanced services multifunction equipment at issue here would barely affect total CLEC occupation of ILEC central offices, if at all. Furthermore, the increasing efficiency and compactness of telecommunications equipment has resulted in a very small DLEC collocation footprint, with or without multifunction equipment. Because the requirement of allowing multifunctional equipment in incumbent central offices cannot in any way adversely affect the incumbent's provision of service, its refusal to allow such equipment can only be based upon a desire to discriminate against the CLECs.<sup>39</sup>

**E. ILECs Must Be Required to Permit CLECs to Self-Provision Cross-Connection Between Collocators in ILEC Central Offices**

In *GTE v. FCC*, the D.C. Circuit also vacated and remanded the rule requiring incumbents to allow collocating competitors to interconnect their equipment with other collocating carriers, known as the cross-connect rule. In the *Collocation Reconsideration Order* and *NPRM* the Commission invited comment on whether Section 251(c)(6) encompasses cross-connects between collocators and whether the Commission could require that an incumbent LEC permit collocators to construct their own cross-connects. The Commission should determine that the 251(c)(6) requirement that ILECs' provide physical collocation of equipment "necessary for

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<sup>38</sup> The Commission has frequently interpreted the "nondiscriminatory" requirement as ensuring that the incumbent provide interconnection at least equal in quality to that provided by the LEC to itself. See 47 U.S.C. § 251(c)(2)(C).

interconnection . . . at the premises of the local exchange carrier” includes interconnection at the incumbents’ premises with other CLECs’ networks as well with as the ILECs’ network, provided the other CLECs have interconnection points at the premises of the local exchange carrier. There is absolutely nothing in the language of the Act or the legislative history that would indicate that Section 251(c)(6) is limited to interconnection between a competitive carrier and the incumbent. In fact, under a literal and plain reading of the statute, a “cross-connection” is “interconnection . . . at the premises of the local exchange carrier.”

Even if requiring cross connects between competitive carriers does not literally come within the meaning of “interconnection” under Section 251(c)(6), the Commission has more than ample authority to require it under the provision requiring that physical collocation of equipment be on “rates terms and conditions that are just reasonable and nondiscriminatory.” The incumbent LEC can connect with each collocating CLEC at the incumbent’s central office. CLECs should be able to do the same. The Commission may also require ILECs to permit CLECs to self-provision cross-connection with other CLECs as a reasonable condition of offering collocation since self-provisioned cross-connection is vital to CLECs’ ability to compete and does not significantly affect ILECs. Finally, requiring incumbents to permit CLEC cross-connection under Section 251(c)(6) is consistent with the Section 251(a) of the Act, which requires all carriers – including the CLECs – to interconnect with other carriers and furthers the purposes of the Act.

If a competitor were not allowed to cross-connect with other co-located CLECs they would be unable to implement network designs that require the use of dark fiber capacity leased from other competitive carriers. Adequate optical cross-connect services from ILECs are

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<sup>39</sup> The Commission should also recognize that ILECs’ prices for collocation space are so high that it would make little sense for CLECs to collocate equipment beyond what is “necessary” for interconnection and access to



sometimes unavailable and even when ILEC optical cross-connects are available, direct cross-connection between CLECs provides a superior quality of service, and, of course, is less costly. Today, CLECs are evaluating hardware capable of OC-192 and even OC-768 levels. CLECs would be blocked from using the advanced technology that enables them to build efficient, competitive networks if they are not permitted to cross-connect at these levels. In addition, even where available, using ILEC optical cross-connects can reduce performance, because a so-called “optical-electrical-optical translation” must occur, significantly increasing latency above optimum performance levels. Use of ILEC hardware for optical cross-connection raises equipment compatibility issues that will further limit technology choice and likely decrease a CLEC’s ability to deploy the most modern and advanced solutions available today. Use of ILEC hardware also reduces circuit reliability because additional electronic hardware will be placed in the circuit. In contrast, direct self-provisioned cross-connection between CLECs does not raise any of these issues or thereby deny any users a competitive service quality choices.

At the same time, as with multi-function equipment, permitting CLECs to self-provision cross-connection in ILEC central offices will not significantly increase occupation of ILEC premises, or place other burdens on ILECs. Cabling generally can be run between adjacent collocation cages or equipment racks, and even when the collocation areas are not adjacent, it is not likely there would be any increased burdens to ILECs central office arrangements since incumbents are constantly running cabling for themselves.

## **F. Collocation at Remote Terminals**

Section 251(c)(6) provides that it is the duty of all incumbent LECs to provide for “physical collocation of equipment necessary for interconnection or access to UNEs at the premises of the local exchange carrier, except that the carrier may provide for virtual collocation if the local exchange carrier demonstrates . . . that physical collocation is not practical for technical reasons or because of space limitations.” Collocation is therefore required at any incumbent LEC premises, including central offices, remote terminals (including CEVs and similar enclosures for equipment) and any other location where equipment necessary for interconnection or access to UNEs can be placed.

Remote terminal collocation is necessary to access certain subloops. For example, @Link explained above the importance of collocation of CLEC own line cards to provide xDSL services over a fiber-fed loop. The Commission recognized the importance of remote terminal collocation in the *UNE Remand Order* and established a rebuttable presumption that the subloop can be unbundled at any accessible terminal in the outside loop plant.

The FCC should require ILECs to evaluate their collocation tariffs and interconnection agreements and propose amendments as needed to ensure that existing collocation rules are applied in a meaningful way to remote terminal collocation. For example, Southwestern Bell advised @Link that its collocation tariff provisions applied equally to remote terminal collocation. However, numerous terms of SWBT’s collocation tariff, from security provisions to minimum space sizes to the provision of a bathroom, are clearly inapplicable to most remote terminals.

**G. The Commission Should Readopt Rules Prohibiting the Incumbent from Unreasonably Restricting Competitor Collocation**

There are a number of rules that the Court in *GTE Service Corp. v. FCC* vacated because it found that the Commission had not sufficiently justified them under the statute. The Commission should ensure that incumbents provide nondiscriminatory physical collocation by readopting the basic premise or purpose of those rules with sufficient justification and clarifications. First, the Commission should readopt a requirement similar to the one that permitted CLECs “to collocate in any unused space in the incumbent LEC premises.”<sup>40</sup> The Court apparently read that rule as allowing the CLEC to always determine where its equipment should be placed. The Court stated that “[t]he sweeping language in paragraph 42 . . . appears to favor the LECs competitors.”<sup>41</sup> The rules that the Commission adopts on remand should favor neither the incumbent nor the competitors. The Commission has the power to adopt rules with that result in mind and the power to adopt rules that prevent the incumbent from adopting unreasonable restrictions that could discriminate against CLEC collocation.

The incumbents should not be able arbitrarily to restrict CLECs to certain areas of the central office building when better useable space is available. The Commission must remember that Section 251(c)(2) requires incumbents to provide interconnection “at any technically feasible point.” In light of this requirement, at most the incumbents ought to be able to adopt reasonable restrictions on the use of space for collocation, but only if the restrictions do not in any way advantage the incumbent.<sup>42</sup> The incumbent could demonstrate that its restrictions are reasonable

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<sup>40</sup> Collocation Order at 42.

<sup>41</sup> *GTE v. FCC*, 205 F.2d at 426.

<sup>42</sup> Unreasonable restrictions would be those that would require more costly collocation, collocation that takes longer to provision, and collocation that results in technically inferior interconnection or access to UNEs.

and nondiscriminatory by applying restrictions equally to itself and to the collocating competitors. The Commission should make clear that any restrictions must not place the CLECs at a significant disadvantage *vis-a-vis* the incumbent with respect to unused space. Ideally, of course, the incumbents and the competitors should work together to ensure that appropriate nondiscriminatory space is available for collocation. But recognizing that such cooperation is not always forthcoming, the Commission should adopt rules that limit the incumbents' right to disadvantage its competitors.

Second, the Commission should reinstate its prohibition on the incumbents unilaterally imposing a requirement that competitors construct a room, cage, or similar structure for its equipment, collocate equipment on a separate floor, or create a separate entrance to its collocation space. Such separation requirements can substantially increase the costs of collocation and are unnecessary to address any concerns of the incumbents. Requiring CLECs to construct separate entrances, instead of leaving CLECs free to use existing entrances, increases costs for CLECs and, in fact, decreases the space available for collocation. And, in the long run, separating CLECs will not affect the ILECs duty to provide collocation space. Once separate space is fully used, the incumbent would still be required to provide collocation in any unused space. Any security concerns that the incumbents may have certainly can be addressed in a far less costly manner.

Finally, the Commission should specifically prohibit ILECs from establishing intermediate points of interconnection in lieu of direct connection to its network facilities. Under the terms of the Act, incumbent LECs are obligated to provide interconnection "at any technically feasible

point within the carrier's network."<sup>43</sup> This requirement, by definition, precludes a requirement of indirect interconnection in circumstances where direct connection is feasible. Moreover, unless justified by technical, operational, safety, engineering or security considerations, such a requirement places the CLEC at less than competitive parity with the incumbent LEC, thus violating the incumbent's obligation to offer interconnection at just and reasonable and nondiscriminatory terms and conditions. Accordingly, the Commission should prohibit ILECs from requiring *indirect* interconnection unless the incumbent LEC certifies to the State Commission in writing that it cannot overcome the conditions that mandate such requirement.

### **III. THE COMMISSION SHOULD ESTABLISH ADDITIONAL REGULATIONS RELATING TO COLLOCATION PROVISIONING INTERVALS AND SPACE RESERVATION.**

#### **A. Tighter Collocation Provisioning Intervals Are Warranted in Many Cases**

The FCC has requested comment on whether it should reduce the maximum provisioning interval for physical collocation arrangements to a period shorter than 90 days and whether it should establish separate minimum installation intervals for various other types of collocation. @Link submits that shorter intervals are clearly warranted for cageless collocation, augments to existing collocation, and for arrangements in which the CLEC agrees or is required to complete portions of the construction for itself. In addition, additional regulation is needed to ensure that a collocation arrangement is usable within a reasonable time after the completion of the interval.

It is already well established that shorter intervals for augments and cageless collocation are feasible and reasonably achievable. Qwest offers to @Link and other CLECs a standard cageless collocation of 45 calendar days; SBC employs a fifty-five calendar day interval for cageless collocation in Texas, Kansas, Oklahoma and Connecticut that applies when the

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<sup>43</sup> 47 U.S.C. § 251(c)(2)(B).

collocator constructs its own bays and racks. Intervals shorter than 45 days are certainly achievable, and CLEC-to-CLEC collocation arrangements have been completed routinely within two weeks. However, at a minimum, @link urges the FCC to adopt the 45 day interval for cageless collocation that Qwest has amply demonstrated to be achievable and reasonable.

Shorter intervals for augments are eminently reasonable and appropriate. Augments may be required to offer new services, i.e. line sharing, that were not available at the time a collocation arrangement was requested. While ILECs would be able to implement new services without the undue delay caused by these excessive intervals, @Link and other CLECs would face extraordinary, discriminatory and unreasonable delays before they could deploy such services. Southwestern Bell recently agreed in Missouri to complete nearly all augment arrangements within 30 days from receipt of the application; an additional thirty days would be allotted where SWBT would be required to condition additional space or supply power that exceeds existing capacity ratings. The Commission can reasonably expect and require the same of all ILECs. Therefore, a thirty day interval for all collocation augments should be established in the same manner that the Commission established a 90 day default interval for initial construction. Longer augment intervals could be approved by a state commission using the same guidelines set forth in the *Collocation Reconsideration Order*.

Shorter intervals for both caged and cageless collocation are also appropriate where the collocator agrees to perform its own cabling, construction of bays and racks, and its own cage. At a maximum, such projects require no more of an ILEC than any cageless arrangement and should be expected to be completed within 45 days.

**B. ILECs Must be Prevented From Undermining Intervals**

The Commission must also ensure that procompetitive construction intervals are not undermined by other ILEC delay tactics. In particular, CLECs often are unable to activate their arrangements in a timely manner because the ILEC fails to provide an accurate Carrier Facility Assignment (“CFA”) to identify where the CLEC will interconnect with the ILEC. @Link cannot order transport used to provide its services until it receives an accurate CFA that is properly entered into the ILEC’s inventory. @Link often suffers significant delays in providing service both because the ILEC does not provide an accurate CFA or fails to provide it in a timely manner. SBC recently agreed in Missouri to provide CFA information at least two days prior to the completion of a collocation arrangement, and explained to @Link that it would implement this new policy region-wide. The Commission should require all ILECs to adopt similar procedures.

In addition, construction intervals today can be completely undermined if the ILEC requires CLEC personnel entering a central office to have security cards. Most ILECs do not have specified intervals for the production of these cards. At present, @Link experiences unreasonable difficulty and delay in obtaining these cards from ILECs. @Link often does not receive the cards for several weeks or more, frustrating its ability to complete its vendor installations necessary to activate a collocation arrangement and to access, utilize and maintain its collocated assets in a timely manner. @Link must obtain access and ID cards for its third-party installation vendors who perform work once the ILEC makes the arrangement accessible. @Link is not able to select a vendor until the ILEC confirms the availability date; @Link’s attempts to secure vendors based upon its estimated dates have been unsuccessful because the actual date is very often different and the vendor was not available, forcing @Link to choose a different vendor. Furthermore, if an ILEC fails to make a collocation arrangement available to @Link on the

previously-assigned availability date, @Link may be forced to change vendors. As a result of these factors, @Link often has little notice before it can identify the individuals requiring security cards.

It is completely incongruous to expect precise intervals for collocation construction but not for the much simpler process of producing security cards. In order to assure CLECs reasonable access to its collocation sites, ILECs should be required to complete requests for security cards, if required, within seven calendar days of receipt of an application for such cards.

When @Link is not able to activate a collocation arrangement on schedule because it cannot obtain security cards or CFA information in a timely manner, @Link's business reputation and its budding relationships with prospective customers are threatened. Like many CLECs, @Link begins to market in areas in advance of providing service in reliance upon the collocation intervals, and delays in activating a collocation arrangement force to delay service to new markets and sometimes to customers who have already signed up for service. Because many of these new and prospective customers may not yet have developed significant affinity for @Link, they sometimes become frustrated with @Link over these delays, and may decide to obtain service from @Link's competitors, including the ILEC and/or its affiliate. @Link may also be forced to reschedule its agreements with its vendors to complete its own construction work at the central offices, as this work must often be scheduled in advance of the completion date. Such rescheduling may result in further delays and higher vendor costs to @Link.

**C. The Commission Should Implement a National Space Reservation Policy for All Forms of Collocation**

In the *Collocation Reconsideration Order* and *NPRM*, the Commission recognized that unchecked ILEC space reservation can limit the amount of available collocation space and inhibit



the timely deployment of competitive services, particularly advanced services,<sup>44</sup> and “strongly” urged state commissions to adopt space reservation policies. At the same time, the Commission invited comment on whether it should adopt national standards “governing the periods for which incumbent LECs and collocating carriers can reserve space for future use.”

@Link urges the Commission to adopt a national minimum standard of no more than two years for space reservation. Although, as noted by the Commission, a few state commissions have implemented space reservation policies, most have not. In states where space reservation policies have not been implemented, incumbents may be able to thwart competition by reserving space indefinitely. For example, before the Oklahoma Corporation Commission required SWBT to adopt its Texas collocation tariff on an interim basis, no space reservation period had been established in the state. @Link understands from its participation in that case that SWBT had previously been reserving space in Oklahoma for its projected needs for *twenty* years. @Link expects that SWBT may be using a similarly outrageous space reservation period in Missouri and Arkansas, where it has not tariffed collocation and no space reservation periods have been established by the state commissions.

While a few state commissions are in the process of establishing space reservation rules, some will likely never do so. For example, the Arkansas Public Service Commission rejected a petition joined by @Link and other CLEC seeking a requirements that SWBT file a collocation tariff, which would have resulted in the establishment of a space reservation period. Despite the CLEC’s citation to numerous references to the *Collocation Order’s* exhortations to state commissions to adopt procompetitive collocation regulations, the Arkansas Commission found

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<sup>44</sup> *Collocation Remand NPRM* at ¶ 50.

that it had no jurisdiction to require SWBT to do anything not specifically required by the Federal Act or the FCC, holding unequivocally that the “FCC’s minimum requirements for collocation are the maximum requirements for Arkansas.”<sup>45</sup> Therefore, the FCC cannot rely on all state commissions to implement necessary collocation regulations.

The determination of how long an ILEC should be allowed to reserve space is not one that requires a state-specific or central office-specific determination. Rather, in determining what is an appropriate time for space reservation, the Commission must determine what is a reasonable time period that balances the need of incumbents to plan their networks with that of the CLECs to collocate their equipment and plan their networks. @Link submits that two years is more than enough time for ILECs to anticipate and plan for future growth needs. With equipment standards constantly changing, it is likely that estimates beyond two years will be inaccurate, and ILECs have an incentive to inflate their estimates or discount future downsizing of switches or other equipment.

The Commission should implement a national policy that will limit these space reservations by incumbents and CLECs alike to a period of two years. The fact that ILECs are continuing to insist on such excessive space reservation periods demonstrates that ILECs are not basing these policies on the realities of the equipment market and reasonable facilities planning, but on their desire to leverage their control of available collocation space and discriminate against CLECs.

Finally, the Commission should hold that ILECs may not invoke space reservation policies to justify collocation intervals in excess of 90 days on the grounds that, while a central office was

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<sup>45</sup> Petition of Connect Communications Corp. et al. for an Order Requiring Southwestern Bell Telephone Company to File a Collocation Tariff, Docket No. 00-047-U, Order No. 4 (Ark. P.S.C. May 12, 2000) at 3.

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not full, that the only remaining collocation-ready space was reserved. Some ILECs today offer much longer collocation intervals for what is commonly called “inactive” space, where asbestos removal, floor loading or lighting, or other extraordinary site preparation is needed (these policies are subject to significant doubt under the *Collocation Reconsideration Order*). It is nonsensical to subject CLECs to lengthy additional intervals to prepare space that it needs immediately while already prepared space lies waiting for an ILEC’s possible needs years into the future.

### **CONCLUSION**

For the foregoing reasons, the Commission should adopt the policies and requirements urged by @Link.

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